

ABSTRACT OF THE DISCLOSURE

CURVATURE ANISOTROPY IN MAGNETIC BITS FOR A MAGNETIC RANDOM ACCESS MEMORY

A magnetic memory cell that uses a curved magnetic region to create magnetic anisotropy is provided by the present invention. The magnetic memory cell is created from a free magnetic layer, a barrier layer and a reference magnetic layer. The magnetic layers are constructed such that they have portions that are curved with respect to a first axis and straight with respect to a second perpendicular axis. These curved portions result in a magnetic memory cell that has an easy axis that is parallel to the first axis and a hard axis that is perpendicular to the easy axis. In addition, the resulting magnetic memory cell's coercivity is independent of its thickness. Thus, the magnetic memory cell is well adapted to being scaled down without increasing the likelihood of thermally induced errors.

MIA1 #1236519 v5

DOCKET NO. YOR920020333US1